

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A printed circuit board comprising:

an insulative substrate;

a conductor pattern formed on the substrate; and

a protection film coating the substrate and the conductor pattern, wherein the conductor pattern includes a bottom surface directly contacting the substrate, a top surface opposite to the bottom surface, and a pair of flat angled side surfaces extending from the bottom surface to the top surface, each of the side surfaces having a lower portion covered by the protection film and an upper portion exposed from the protection film, wherein both the bottom surface and the top surface have widths, the lower portion of each side surface covered by the protection film and the conductor pattern have heights, and wherein the width of the bottom surface is greater than the width of the top surface; and

a plating for coating the top surface and the upper portion of the side surfaces of the conductor pattern, wherein the plating has an uppermost portion located at a position higher than a surface of the protection film.

Claim 2 (previously presented): The printed circuit board according to claim 1, wherein the conductor pattern has a trapezoidal cross-section.

Claim 3 (canceled)

Claim 4 (previously presented): The printed circuit board according to claim 1, wherein the height of the lower portion of each side surface covered by the protection film in the conductor pattern is 50% or greater and less than 100% of the height of the conductor pattern.

Claim 5 (canceled)

Claim 6 (currently amended): The printed circuit board according to claim ~~5~~ 1, further comprising a solder ball contacting the plating at the upper-portion of the side surfaces.

Claim 7 (previously presented): The printed circuit board according to claim 1, wherein a value X is obtained by the following formula:

$$X = ((c-d) / 2) / p$$

where c is the width of the bottom surface, d is the width of the top surface, and p is the height of the conductor pattern, and wherein X is in the range of 0.1 to 2.5.

Claim 8 (currently amended): A method for fabricating a printed circuit board comprising the steps of:

etching an insulative substrate including a conductor to form a conductor pattern having a bottom surface directly contacting the substrate, a top surface opposite to the bottom surface, and a pair of flat angled side surfaces extending from the bottom surface to the top surface, wherein the conductor pattern is formed so that a width of the bottom surface is greater than a width of the top surface;

applying an insulative protection film to the conductor pattern and the substrate; ~~and~~
removing a portion of the protection film to expose the top surface and an upper portion
of each of the side surfaces; and
forming a plating on the exposed top surface and the upper portion of the side surfaces of
the conductor pattern, the plating having an uppermost portion located at a position higher than a
surface of the protection film.

Claim 9 (canceled)

Claim 10 (new): The printed circuit board according to claim 1, wherein the material of
the plating is one of copper, gold, and nickel.

Claim 11 (new): The printed circuit board according to claim 1, wherein engaging
grooves are formed between the conductor pattern and the protective film.

Claim 12 (new): The method according to claim 8, further comprising:
joining a solder ball to the plated top surface and upper portion of the side surfaces of the
conductor pattern.

Claim 13 (new): The method according to claim 12, wherein the material of the plating
is one of copper, gold, and nickel.

Claim 14 (new): The method according to claim 8, wherein the step of removing a
portion of the protection film includes forming engaging grooves between the conductor pattern
and the protective film.

Application No. 09/740,424

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Reply to Office Action mailed January 27, 2004

Amendments to the Drawings:

The attached sheet is an additional drawing for new Fig. 8.

Attachment: New Drawing Sheet